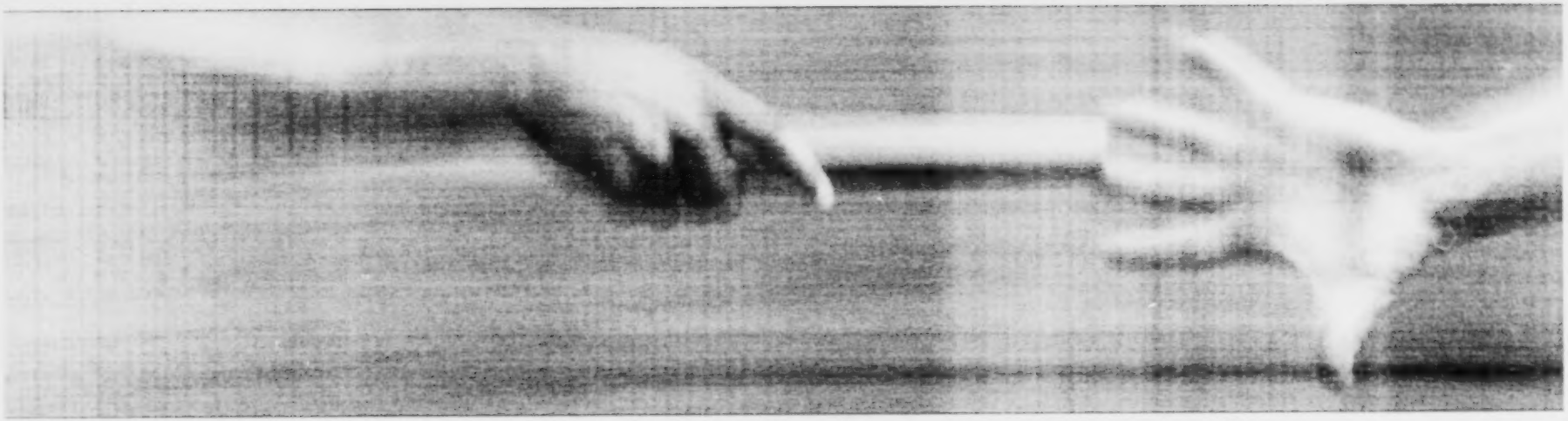
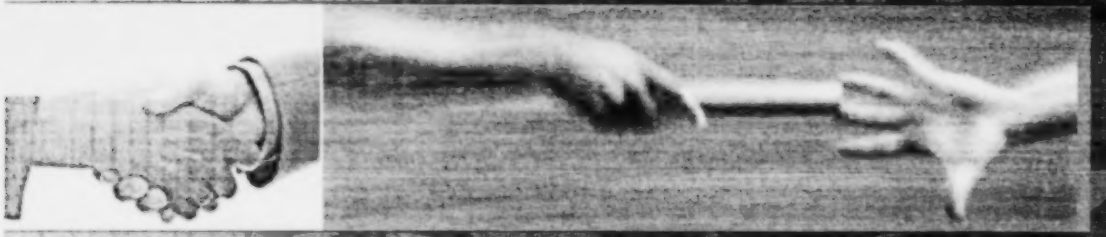


Collaboration and Partnership

NOVA SCOTIA
Health Research
FOUNDATION

Annual Report 2004.05



The mission of the Nova Scotia Health Research Foundation is to help improve the health of Nova Scotians by developing and supporting a vibrant and sustainable health research community throughout the province.

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MESSAGE FROM THE CHAIR

The theme of this year's annual report – Collaboration and Partnership – is central to the success of the Nova Scotia Health Research Foundation and, indeed, to the health research community throughout this province. It is only by working together at all levels that we will continue to move forward.

I am proud to say that health research throughout Nova Scotia is encouraged and facilitated through support from the Nova Scotia Health Research Foundation, whose mandate is to assist, collaborate with, and fund health research across the province.

This year we celebrate joining forces and working as a team, concepts that emerged as cornerstones of many of the grant applications NSHRF received in 2004. In a time when increasing demands are being made on existing resources, collaboration makes great sense. It avoids duplication and makes the best use of available funds.

This year we celebrate joining forces and working as a team, concepts that emerged as cornerstones of many of the grant applications NSHRF received in 2004. In a time when increasing demands are being made on existing resources, collaboration makes great sense.

However, what we at the Nova Scotia Health Research Foundation know – and what all of you know, as well – is that collaboration and partnership always makes sense. When different people, institutions and organizations work together, they bring a combination of knowledge and expertise – and a breadth of perspective. This leads to achievements that simply aren't possible when we work in isolation.

That shared expertise is evident in a new organization of provincial health research funding agencies from across the country established to address issues of mutual concern. The Foundation's CEO, Krista Connell, was asked to co-chair that national group. On behalf of the Board of Directors, I congratulate Krista on this honour. An honour that recognizes the key role NSHRF is playing on the national health research scene.

2004 marked my first full year as Chair of the Nova Scotia Health Research Foundation. It was a year of significant achievement and growth, and my job in helping to guide the organization in achieving its strategic plan was made much easier by the able assistance of a Board of Directors whose commitment to excellence in health research is unwavering.

That commitment to excellence was exemplified by two board members whose terms ended this year: Joan Fraser and Tom Larder. On behalf of the entire Board of Directors, I wish to extend my sincere appreciation for their efforts and their insight.

I also want to welcome three new members to the Board: Frances Hinton, Peter Mullen and Maureen Summers. Frances is a lawyer and registered nurse. Her legal career has been focused on dispute resolution and human rights, and her nursing background is in cardiac research. Peter, who earned his PhD at the University of Manchester in England, is the founder and president of Kemic Bioresearch in Kentville, which provides research and consulting services in pharmacokinetics and toxicology. Maureen, who has an MSc in Health Studies from the University of Waterloo, is the Executive Director of the Canada Cancer Society – Nova Scotia Division.

The celebration of collaboration and partnership that we are focused on this year is reflected daily in the way the staff of the Nova Scotia Health Research Foundation perform their jobs – and the way they approach everything from capacity building to developing innovative programs to planning for the future. On behalf of all of the Board of Directors, our sincere thanks to Krista Connell and her team.

Together we will help improve the health of Nova Scotians by developing and supporting a vibrant and sustainable health research community throughout this province. As a Nova Scotian, I am proud and honoured to have the privilege of serving you.

Brian MacDougall
Chair

MESSAGE FROM THE CEO

While many of you are very familiar with the mandate of the Nova Scotia Health Research Foundation, it bears repeating, especially in a year where we celebrate – and demonstrate – collaboration and partnership.

Our mandate is to assist, collaborate with, and fund research in this province. We are doing that in four key areas of research: biomedical, health policy, health services, and health outcomes research. Our vision is to help create a vibrant, world-class health research community.

World-class. It isn't a word we use lightly at NSHRF. But we do use it accurately to describe what is happening – increasingly – right here and right now. The quality of applications we receive continues to be high. In fact, as the caliber keeps climbing, the process becomes more and more competitive. This year 23 health research grants were awarded. Among the successful applicants were researchers from oncology, psychology, social work, cardiology, oral hygiene, and pharmacology, to name just a few.

This year marks our fifth competition. That is a milestone we are proud to achieve. While there is part of me that can't believe the Foundation has celebrated five awards competitions, there is part of me that finds it hard to believe we weren't always here.

As many of you know, our job goes well beyond the provision of funding. We also support researchers so they can contribute on the national and international stage. We help to attract new researchers from outside the province, and we create an awareness of the tremendous expertise that already exists here.

The quality of our applications has been excellent from the start. But one change we have been happy to witness over the past years is an increase in diversity. With each succeeding competition deadline, a broader range of disciplines, professions, geographical areas, organizations and institutions is represented. Our student applications, in particular, have exceeded expectations.

This year, we celebrate research collaboration and partnership. Building partnerships is actually part of our mandate. We work to foster collaboration among disciplines and across institutions. Working together means that everyone gains.

Our hope, of course, is that many of these long and fruitful careers will be based in Nova Scotia. The work of the Nova Scotia Health Research Foundation – in partnership with the health research community, government, academia and other key sectors – is to make that possible. Together we will

This is true whether the collaboration involves researchers, practitioners and community organizations across the street, across the province, the nation, or the globe.

At NSHRF we have developed support provisions to encourage collaboration and partnership. Let me outline a couple of these, briefly:

- Our collaborative health research project grants encourage submissions from one or more universities or health care institutions that wish to embark on a project with community organizations in Nova Scotia. By community organizations, we include action groups, volunteer groups, government, business, and district health authorities.
- Our community alliances opportunity adheres to the same principles. These grants provide start-up funding for collaborations between organizations that have not worked together on projects before. The goal is to build on the expertise and contribution of each member. Working together, grant recipients create innovative and feasible approaches to addressing health research questions in a manner responsive to the needs of Nova Scotians.

On behalf of all of us at the Nova Scotia Health Research Foundation, I want to extend my appreciation to all health researchers throughout the province. Your discipline and focus, your expertise and your insight are the cornerstone of a successful health research community. We appreciate all the hard work you have done – and will continue to do.

Our hope, of course, is that many of these long and fruitful careers will be based in Nova Scotia. The work of the Nova Scotia Health Research Foundation – in partnership with the health research community, government, academia and other key sectors – is to make that possible. Together we will.

Krista Connell
CEO

HIGHLIGHTS OF 2004-2005

» A national group of Provincial Health Research Organizations has recently been established to address issues of mutual concern – and NSHRF CEO Krista Connell has been asked to co-chair. Joining her at the helm is Aubrey Tingle, President and CEO of the Michael Smith Foundation for Health Research in BC.

» Six Nova Scotian Young Investigators, which includes students and new scientists, were successful in the competition for travel awards to the National Research Forum for Young Investigators in Circulatory and Respiratory Health. Five of these award winners are Masters or PhD students.

» NSHRF was proud to be honoured – for the third consecutive year – with an Award of Merit from the Canadian Public Relations Society – Nova Scotia. Our program, *The Quest, The John Ruedy Award*, a collaboration with Capital Health, won a Jasper Award in this year's awards competition, which celebrates the best of the best in communications initiatives. *The Quest* is given annually to the student researcher who demonstrates the greatest promise and potential for excellence in health research.

» Building research capacity is critical to the long-term success of Nova Scotia's health research community. At NSHRF, we have enhanced our Capacity Building Program to better address the growing needs of researchers across the province. Some of the changes to the program include changes to the Student Awards and the Research Skills Awards.

And the applications roll in . . . and in and in.

» In an ongoing effort to streamline and simplify the application process, NSHRF moved exclusively to a web-based system for posting application forms and guidelines. Effective with the 2005 competition, paper copies of application forms and guidelines were no longer available. Instead applicants could easily download them directly from the website – www.nshrf.ca.

» CIHR awarded $920,000 to 10 Atlantic Canadian universities to develop greater capacity in health research in 2001/2002. On behalf of CIHR, NSHRF commissioned an independent report on the program. It's an impressive success story: *Developing Strength: The Stories Behind the Grants: A report on what the CIHR Institutional Development Grants have meant for universities and health researchers throughout Atlantic Canada.*

» The 2004-2005 grants competition saw a flood of applications come through the door. More than 59 applications were received for health project and collaborative health project grants, 150 for student awards, and 24 for capacity building grants. Approximately $4.2 million in funding was allocated in this, the Foundation's fifth, provincial competition. The grants awarded cover a broad range of health-related issues – everything from investigating the incidence of congenital heart disease in Nova Scotia children to investigating the nature of childhood aggression to a clinical study on how the brain sends –and could better send – messages to the body after a spinal cord injury.

HEALTH RESEARCH ROCKS!

Theresa Marie Underhill of Cancer Care Nova Scotia, Jyl MacKinnon-Crowell, Dalhousie Medical Research Foundation, Deborah Langille, Nova Scotia Health Research Foundation and the MegaSearch™ winners Henry Doane, Nick Nguyen, Geoffrey Chase.

Congratulations to LeMarchant-St. Thomas Elementary School students Geoffrey Chase, Henry Doane and Nick Nguyen who took top honours in the province-wide MegaSearch™ competition with their epilepsy project.

The competition is an optional component of MegaSearch™, a curriculum supplement that includes an educational comic book of the same name together with related activities, promoting interest in health, medical science and local medical research. MegaSearch™ was developed by Dalhousie Medical School for grade five students throughout the province and is available in English as well as French. The Nova Scotia Health Research Foundation is proud to be a MegaSearch™ partner.

FIRST-OF-A-KIND INSTITUTE TEACHES HEALTH RESEARCH METHODS, HANDS ON

In 2004, the Nova Scotia Health Research Foundation announced the launch of a new program in applied health research methods and design to lend senior PhD students and junior faculty members in Nova Scotia institutions a helping hand. This is the first such program of its kind in Atlantic Canada.

"Translating meaningful research questions into appropriate research methods and design is a skill. However, it is a skill most researchers don't learn in school," says Krista Connell, NSHRF CEO.

Dr. Patrick McGrath, a Canada Research Chair at Dalhousie University-IWK Health Centre, developed the program to supplement the more general statistics and research design courses many educational programs provide. "The purpose," he explains, "is to give participants an intense experience in research methods, design, and proposal writing. We want to help prepare them for developing their careers in applied health research."

The program is open to researchers from the social sciences, humanities, as well as the sciences, medicine and health.

"NSHRF supports partnering and collaboration in all of our initiatives," notes Ms. Connell, "so we have also opened the program to community agencies who are partnering with researchers on a specific project."

Each researcher (or team) will arrive at the institute with an overview of a proposal and spend the next four days in an intensive hands-on exploration of research methods, design and dissemination led by experienced and accomplished researchers. "By the end of the course, they will leave with a five- to six-page draft of their proposal, ready to be expanded and submitted to a funding agency the next year," says Dr. McGrath.

A capacity-building initiative, the program is designed to encourage and foster skill-development in Nova Scotia's health research community. "I read about it and thought it sounded ideal," says Dr. Margo Watt, a member of the Department of Psychology at St. Francis Xavier University who is co-developing a new anxiety sensitivity treatment with a three-year grant from NSHRF.

"A program like this," she says, "is exactly what researchers need when they are starting out."

ABOUT NSHRF

The Health Research Foundation Act (Bill 22) was given Royal Assent on December 3, 1998. Little more than a year later, on January 1, 2000, the Act was proclaimed. By September, the Nova Scotia Health Research Foundation Office was staffed and fully operational.

The Foundation is the first health research organization in Nova Scotia funded by the provincial government.

The goal of the Foundation is to assist, collaborate with, and fund individuals and organizations conducting health research in the province. Health research is defined in the broadest possible sense.

The establishment of a health research foundation was recommended by the Health Research Task Force in 1996. In the Task Force's 40-page report to government, it noted that health research in Nova Scotia "is severely disadvantaged at present. The lack of provincial funding limits Nova Scotia's capacity to compete nationally and to build a strong support system for decision-making. Although significant pockets of research excellence exist, there is no coordinated mechanism to support health research."

AT OUR CORE

There are 10 values at the core of NSHRF – and at the heart of our strategic plan. They are:

- **Excellence in health research**
- **Relevance to health in health research priorities**
- **Fairness and transparency**
- **Accountability**
- **Inclusivity**
- **Citizen participation**
- **Partnering**
- **Capacity building**
- **Innovation**
- **Responsiveness**

PEER REVIEW COMMITTEES 2004-2005

NSHRF PEER REVIEW PROCESS AND GUIDELINES

The Nova Scotia Health Research Foundation is committed to helping improve the health of Nova Scotians by developing and supporting a vibrant and sustainable health research community throughout the province. A key component of accomplishing this mission is awarding research funds based on scientific excellence determined by a rigorous scientific review process.

Since NSHRF was established, a scientific review process has been put in place, and we have also adopted national peer review process and guidelines.

HEALTH POLICY, SERVICES, OUTCOMES CATEGORIES OF RESEARCH

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Lori Francis	Saint Mary's University
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Peter Twohig	Saint Mary's University
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Grace Warner	Atlantic Health Promotion Research Centre

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Gail Storr	University of New Brunswick
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P.G. Forest	Health Canada

SCIENTIFIC OFFICERS

Angie Thompson	St. Francis Xavier University
Lynn Langille	Atlantic Health Promotion Research Centre

BIOMEDICAL PEER REVIEW COMMITTEE

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MEMBERS

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René J.L. Murphy	Acadia University
Tony Otley	IWK/Dalhousie
Mike Wilkinson	IWK/Dalhousie
Vic Rafuse	Dalhousie University
Tara Perrot-Sinal	Dalhousie University

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Thomas Haas	University of Saskatchewan
Erika Gisel	McGill University
Jack Stewart	Mount Allison University

SCIENTIFIC OFFICERS

Melanie Kelly	Dalhousie University
Doug Rasmusson	Dalhousie University

Exploring women's alcohol use as self-medication for depression

Catrina Gibson Brown
Maritime School of Social Work
Dalhousie University

Co-applicants
Sherry Stewart, Dalhousie University
Peter Horvath, Acadia University
Julianna Wiens, Dalhousie University

Which comes first: chronic alcohol abuse or depression? Recent research indicates that the answer may depend on gender. For men, depression most often follows alcohol abuse, but for women it appears to come first – suggesting that women may use alcohol to self-medicate for depression. This study will build on existing research and seek to gain an understanding of women's experiences of the relationship between depression and problem drinking. A multi-method research design will be used, including semi-structured qualitative interviews with depressed women who are in treatment for alcohol abuse.

A step toward recovery of movement

Robert Brownstone
Division of Neurosurgery
Dalhousie University

Movement occurs when the brain sends two types of information to the spinal cord: the command to move and the signal that sets the excitability of spinal cord neurones. The latter is regulated, largely, by what is known as the raphespinal system. In circumstances such as spinal cord injury, input from the raphespinal system is disrupted. However, recent evidence has identified a system within the spinal cord itself (the cholinergic system) that can play a similar role. This project will study motoneurone excitability and will compare the two systems in the hope that the cholinergic system can eventually be harnessed to perform the function of the raphespinal. For people with paralysis, this would be a step toward recovery of movement.

Towards a new model of care delivery for lung cancer patients and their families

Lorna Butler
Departments of Nursing and Urology
Dalhousie University

A new way of providing care for people with lung cancer and their families is being evaluated. The aim of the new model is to ensure that people with lung cancer receive more comprehensive support following treatment and that healthcare resources are used as efficiently as possible. To achieve this, a nurse-led model of post-treatment care has been established that focuses on ensuring patients' physical, emotional, social, spiritual, and financial needs are met in a timely manner. The contact with the nurse is either made by telephone or clinic visit, whichever is in the best interest of the patient. It is believed that the appropriate use of telephone contact reduces the time patients and their family members need to spend attending lengthy clinic visits. This project will provide necessary information for a larger study to be conducted comparing the new model to the standard method of post-treatment care. In addition, it will offer valuable information that will advance improvements in health issues, costs, and quality of life of Nova Scotians.

Distance treatment of sleep problems in school-aged children with and without behaviour problems

Penny Corkum
Departments of Psychology and Pediatrics
Dalhousie University and IWK Health Centre

Up to 40 percent of elementary school-aged children suffer from severe and chronic sleep difficulties. Sleep problems have a major impact on many aspects of children's lives (e.g., ADHD). Given the significance and widespread nature of sleep problems in childhood, the development and evaluation of effective treatment strategies is a health priority. Consequently, a critical need exists for a well-designed, controlled trial to evaluate the effectiveness of a comprehensive, behaviourally based sleep intervention for elementary school children, particularly for those with additional behavioural difficulties. Furthermore, these services must be accessible to as many Nova Scotians as possible. Therefore, this intervention will be delivered using a distance-treatment approach where the services are provided over the telephone. It is expected that the children who participate in the sleep intervention will show improvements in the quality of their sleep as well as improvements in their daytime behaviour. Moreover, it is anticipated that the parents will report a reduction in their overall level of stress. This study will also build capacity in this under-serviced health area.

Rearrangement of neural circuits in the visual system following vision deprivation

Kevin Duffy
Department of Psychology
Dalhousie University

Approximately four percent of people suffer from a type of visual impairment called amblyopia that cannot be treated with surgery or corrective lenses. Attention has recently focused on the impact that deprivation has on the distribution and expression of neurofilaments in the visual system. Neurofilaments are cytoskeleton proteins that provide both structure and function to a neuron. We have recently shown that early visual deprivation causes a dramatic loss of neurofilament protein in cortical neurons connected to the deprived eye. These results suggest that a rearrangement of neural connections in the cortex contributes to the loss of vision. Neurons in the deprived cortex also exhibited anatomical characteristics similar to those found in neurodegenerative disorders. The proposed experiments are designed to provide a characterization of neurofilament and neurodegenerative-like changes that result from visual deprivation. This line of research has already produced important insight toward understanding the neuronal changes that underlie deprivation-induced blindness. With the looming epidemic of neurodegenerative diseases, this research could also provide a mechanistic understanding of the progression and possible recovery from neurodegenerative disorders.

Exploring questions underlying palliative organized inpatient stroke experiences: The EQUIPOISE Study

Gordon Gubitz
Department of Neurology
Queen Elizabeth II Health Sciences Centre

Stroke is a common disease in Nova Scotia. Over the next 20 years or so, more people will be affected by stroke; up to 15% of these people will die within a few days, especially if the strokes are very large. At the present time, doctors and nurses working on the Acute Stroke Unit in Halifax treat those dying from devastating stroke using established methods that aim to respect the patient, maximize comfort and reduce suffering. Little is known about how those close to these patients are affected by this palliative care process. In this research project, the patient's family or other loved ones will be asked to participate in an interview several months after the death has happened. If they agree to participate, they will be interviewed by a nurse who is also a professional bereavement counselor. A written survey will be completed, followed by a series of questions, which will be asked to learn more about the experiences of the bereaved as their loved one is being cared for while they die on the stroke unit. Nurses who care for these patients will also be interviewed to understand their experiences of providing palliative care. The results of the research will be used to modify clinical practice and to inform those who are in the process of developing Acute Stroke Units in other parts of Nova Scotia.

New class of potent anticancer molecules

Amitabh Jha
Department of Chemistry
Acadia University

Currently available approaches for the intervention of cancer suffer considerable side effects. Many forms of cancers have become drug-resistant. The proposed investigation aims to develop clinically useful novel anticancer agents with potential to treat cancers unresponsive to current therapies. We have identified a new class of potent anticancer molecules. These compounds are markedly divergent in structure from currently available anticancer drugs and, hence, may be of value in treating drug-resistant tumors.

The role of the muscles in shaping the bones and joints

Boris Kablar
Department of Anatomy and Neurobiology
Dalhousie University

Mechanical effects on the growth of bones and joints are so evident that it seems highly probable that early fetal motility plays a part in shaping the skeletal system. This project will use a particular type of genetically engineered mouse embryos without skeletal muscles to investigate for the first time in vivo skeletal system development in the complete absence of skeletal myogenesis. This will help to increase our understanding of the consequences of the conditions characterized by muscle wasting and muscle loss.

Overdenture study

Mats Kronstrom
Faculty of Dentistry
Dalhousie University

Many edentulous individuals (i.e., missing all their natural teeth) suffer from impaired ability to chew, constant pain, and discomfort because of problems with their dentures especially in the lower jaw. By using dental implants to stabilize the denture, remarkable improvements in oral function and comfort can be achieved. Treatment options using a reduced number of implants and less complicated surgical procedures could be beneficial for these patients, resulting in less complicated and less expensive treatments. Developing simpler, less expensive methods and making them available for older edentulous individuals with limited financial resources could result in not only an improved oral health but also benefit the individuals' psychosocial situation, nutritional state, quality of life, and well-being. This research project will aim to establish new and improved treatment options for geriatric patients with severe impairment of oral function and will measure subsequent improvements in their quality of life and well-being.

Molecular mechanisms of allergic asthma

Tong-Jun Lin
Departments of Pediatrics, and Microbiology and Immunology
IWK Health Centre and Dalhousie University

Mast cells are central players in allergic diseases. This is because allergen binding to the surface of mast cells initiates a series of molecular events leading to the release of potent mediators from mast cells. Our goal is to better understand the mechanisms involved in allergen-induced mediator secretion from mast cells. We will focus on two important molecules, namely, protein kinase C (PKC) and protein phosphatase 2A (PP2A), the former phosphorylates proteins and the latter dephosphorylates proteins. Interaction between these two molecules likely has an important regulatory role in allergen-induced mediator release from mast cells through maintaining the level of protein phosphorylation. Our experiments will be carried out to examine how PKC and PP2A interact during antigen-induced mast cell activation. Innovative approaches such as generation of embyonic stem cell-derived mast cells will be used. This study will provide new insights into the allergic diseases for the development of new approaches in order to control allergic reactions.

Measuring the quality of the use of medications for diabetes

Neil MacKinnon
College of Pharmacy
Dalhousie University

This pilot project will involve the development and use of tools that will measure the quality of the use of medications for diabetes. In the first step of the study, four project partners (Dalhousie University's Faculties of Health Professions, Computer Science and Medicine; the Nova Scotia Department of Health; the Diabetes Care Program of Nova Scotia; and Lawtons Drugs/Sobeys pharmacies) will jointly develop tools called quality indicators that allow one to assess the quality of medication use/non-use in patients with diabetes. Following this, individuals with expertise in computer programming and large databases will work with Lawtons/Sobeys pharmacy computer system to turn these quality indictors into automatic alerts that will appear on the pharmacy's computer when a pharmacist fills a prescription for a patient with diabetes. These "alerts" will be pilot tested in two randomly selected pharmacies over a three-month time period. After pilot testing the alerts, an application for funding will be submitted to implement the alerts system in other pharmacies throughout Nova Scotia. These alerts will be used in an effort to improve medication use and feedback will be provided on a regular basis to pharmacists, physicians and the Diabetes Care Program of Nova Scotia.

Measuring oral health in seniors

Debora Matthews
Faculty of Dentistry
Dalhousie University

Joanne Clovis
School of Dental Hygiene
Dalhousie University

Co-applicants:
Paul Allison, Susan Kirkland,
Mary McNally, Mark Filliaggi,
Patricia Main

Nova Scotia has the third-highest percentage of seniors in Canada – and a need to establish oral health priorities that will contribute to healthy aging. Due to the private nature of oral healthcare, there are profound disparities among many under-served populations, including seniors, who have an increased risk of oral cancer, dental cavities and periodontal disease. This pilot project recognizes that a clear understanding of people's needs is the first step toward developing appropriate policy. Researchers will assess the feasibility of measuring the baseline oral health status of Nova Scotians age 65 and over. The project will be partnered with the Senior Citizens' Secretariat and the Nova Scotia Dental and Dental Hygienists Associations.

Cell death in heart disease

Kishore Pasumarthi
Department of Pharmacology
Dalhousie University

A tragic irony of heart disease is that the heart may be doing all the right things, all too well. During disease states, the heart attempts to compensate. It responds to increased workloads by activating various signaling pathways in an attempt to maintain normal cardiac performance. If these pathways are left unchecked, they can damage the heart muscle cells and subsequently lead to heart failure. This project will look at the role played by a protein called Cyclin Dependent Protein Kinase 1 (CDK1) to determine whether eliminating or reducing the activity of CDK1 or other relevant proteins could help. Potentially, the research could lead to the development of better therapies for heart disease sufferers.

Treatment of patients with hormone independent prostate cancer

Ricardo Rendon
Department of Urology
Dalhousie University

This project will challenge the current practice of maintaining hormonal treatment in all patients who have hormone independent prostate cancer with LHRH agonist injections. The researchers hypothesize that this treatment is unnecessary for most patients and highly expensive – being the most costly pharmacological intervention in cancer management – and that because of its toxicity it reduces patients' quality of life. They plan to demonstrate that the financial cost and toxicity burden can be reduced with no compromise to patient safety or treatment efficacy. The results are expected to have a major impact on the standard of care for this common disease in Nova Scotia and, potentially, nationally and internationally.

Improving preventative health behaviours in Nova Scotia

Steven Michael Smith
Department of Psychology
Saint Mary's University

Public health campaigns are well-intended – urging people to wear sunscreen, to exercise, etc. – but they often fail in their attempts to affect behaviour. This project will look at what goes wrong and what could be done better. For example, recent research suggests that ads showing out-of-shape people may backfire: viewers (especially young adults) may conclude that out-of-shape is "normal." This project will combine laboratory and field studies to explore the theoretical underpinnings of public awareness campaigns. Researchers will explore the pressing question for health promotion strategy: How do we convince people to engage in healthier behaviours?

The frequency of congenital heart disease in Nova Scotia children

Andrew Warren
Children's Heart Centre
IWK Health Centre

Through the linkage of three large population databases, this project will look at the incidence of congenital heart disease (CHD) in Nova Scotia children. Researchers will measure the prevalence of CHD among newborns in the province, assess the risk factors involved, and determine the rate and outcome of detection. The results are expected to be useful on three levels: to help individuals minimize their exposure to potential risks; to help practitioners assess the impact of interventions; and to help governments predict funding needs.

Understanding intervention: Building capacity in non-invasive multi-modal neuroimaging

Steven Beyea
Institute for Biodiagnostics (Atlantic)
National Research Council of Canada
Departments of Radiology and Physics
Dalhousie University

The objective of the current proposal is to begin work that focuses on improving assessment through functional brain imaging. While still in its relative infancy, functional neuroimaging has already provided critical advances in understanding the brain and applying this knowledge to the treatment of various brain diseases and disorders. The imaging advances developed through this project will help catalyze future studies in brain repair. They will have a direct impact on assessing intervention by overcoming the current challenges faced in neuroimaging. Research in neuroscience is a strong regional asset. With the NRC's recent investment of state-of-the-art imaging infrastructure (4-Tesla MRI, MR-compatible high-resolution EEG), we can combine these scientific and technical assets to build neuroimaging research capacity as a vital component of medical research in Nova Scotia.

Families with special needs children: Minimizing psychological stress and strain of work-family conflict

Arla Day
Department of Psychology
Saint Mary's University

Balancing work and family responsibilities is a growing concern for the majority of Canadian families. The problems in balancing these responsibilities are often compounded for parents with special needs children (e.g., Down's syndrome children, attention deficit/hyperactivity disorder children, children with physical disabilities.) Parents with special needs children may experience increased difficulty in balancing work and family obligations, and they may require unique supports to help them manage the stress and strain associated with work-family conflict. We will develop collaborations among organizational, child, and educational psychologists as well as other healthcare professionals in order to examine the incidence and management of work-family conflict in families with special needs children.

Contribution of neuronal sprouting to disturbed bladder function after spinal cord injury

John Downie and Victor Rafuse
Department of Pharmacology and Department of Anatomy and Neurobiology
Faculty of Medicine
Dalhousie University

This project will lay the groundwork for continued, detailed investigation into ways to control some of the changes that occur in the body after spinal cord injury. Specifically, the project will focus on "neuronal sprouting" – the post-injury growth of spinal neurons to make new or stronger contacts with other neurons. Unfortunately, neuronal sprouting appears to contribute to bladder function disorders. This project seeks to alter the sprouting process through the spinal administration of a specific enzyme, which, it is predicted, will prevent nerve terminals from extending. The researchers will, thereby, disrupt the development of bladder disorder in a rat spinal cord injury model. Ultimately, the results of this project will contribute to improved rehabilitation for people with spinal cord injury.

Projecting the need for chronic home care support for Canada's elderly and assessing its impact on human resources

Janice Keefe
Family Studies and Gerontology
Mount Saint Vincent University

With the aging of the Baby Boomers, there is bound to be an increased need for home care services. But how large an increase? And how can the healthcare system best prepare to meet it? This project will allow a research team to lay the groundwork for answering these questions. The team, equipped with expertise in projections of this nature, will use innovative modeling techniques through Statistics Canada's LifePaths microsimulation model. They will investigate using data from the 2002 General Social Survey and the 2001 Canadian Community Health Survey to refine their projections of the degree of disability and the availability of family support from 2001 to 2031. The results will contribute to an understanding of the need for home care services in an aging society.

Development of a functional neuroimaging paradigm to study plasticity in human motor cortex

David Westwood
School of Health and Human Performance
Dalhousie University

The recovery of language, memory, and movement after a stroke depends, in large part, on the plasticity of the central nervous system – in other words, on the brain's ability to recover lost functions or acquire new ones. This project seeks to increase our understanding of the biological mechanisms that make plasticity possible. Researchers will develop a "brain mapping" approach using FMRI technology (functional magnetic resonance imaging) in a novel way. Instead of just determining which region of the brain is active while people learn new activities, this new FMRI paradigm will allow researchers to understand how learning changes the flow of information in the brain. For the first time, researchers will be able to determine what is actually taking place in the brain when new movement skills are learned – with significant implications for improving stroke rehabilitation and recovery.

Nurse practitioners in long-term care: A collaboration among administrators, practitioners and university health researchers

Ruth Martin-Misener
School of Nursing
Dalhousie University

As the life expectancy of Nova Scotians increases, complex health and social challenges arise. Older adults in long-term care facilities require a full range of primary healthcare, e.g., health promotion, disease prevention, curative and rehabilitative services, delivered in a patient-, family- and community-centered way. Traditional models of care are becoming difficult to sustain. Initiated by Northwoodcare Incorporated, this project will look at a new approach that is starting to be explored: the introduction of nurse practitioners into long-term care facilities. Collaborative in nature, the project will bring administrators and healthcare providers from Northwoodcare in Halifax together with interdisciplinary health researchers from Dalhousie, McMaster and Ryerson Universities. They will develop a plan to evaluate the impact of nurse-practitioner care on residents' health and quality of life.

Hypertension in patients with Diabetes Mellitus Type 2

Wayne Putnam
Department of Family Medicine
Dalhousie University

Patients who suffer from both hypertension and diabetes run a much higher risk of long-term complications such as stroke, blindness, and renal failure – with enormous impact on individuals, families, and the healthcare system. We know that risk can be reduced with effective treatment. However, we have insufficient understanding of how best to manage and treat these diseases in a primary care setting. This project will take a collaborative approach to the question of effective care and management. Family physicians from a wide variety of practice settings and communities will work with university faculty who have experience in primary care research.

STUDENT RESEARCH AWARDS
SUCCESSFUL APPLICANTS | 2004 – 2005

Name	Department / Institution	Program	Project Title
Ackroyd-Stolarz, Stacy	Community Health and Epidemiology Dalhousie University	PhD	Patient safety in emergency medicine
Anger, Gregory John	Department of Pharmacology Dalhousie University	Masters	Neuroprotective signal transduction in a neonatal model of hypoxic-ischemic brain injury
Barry, Christopher	Department of Medicine Dalhousie University	Masters	Elucidating membrane fusion requirements using reovirus p10 fast proteins
Blagoveshchensky, Evgeny	Department of Anatomy and Neurobiology Dalhousie University	Post Doc	Role of descending spinal cord serotoninergic projections in control of movement
Blair, Karen	Department of Psychology Acadia University	Masters	So, do you like him/her ? Social network support of heterosexual vs. homosexual relationships, as predictors of physical and mental health
Burke, Sara Marie	Department of Microbiology and Immunology Dalhousie University	Masters	Does the activation of mast cells through toll-like receptors during viral infection lead to the exacerbation of asthma?
Butler, Heather	School of Health and Human Performance Dalhousie University	PhD	Diagonistic classification of low back pain based on mechanical biological and psychological characteristics
Charron, Diane	School of Human Communication Disorders Dalhousie University	Masters	Improving psychosocial outcomes for adolescents with traumatic brain injury: Effectiveness of peer training
Coolican, Jamesie	Psychology Department Dalhousie University	PhD	The detection of high but imperfect environmental contingencies in typical infants and children with autism
Farrell, Karen	School of Health and Human Performance Dalhousie University	Masters	An evaluation of the quality, readability, and Canadian content of health information on Internet websites for female urinary incontinence

STUDENT RESEARCH AWARDS
SUCCESSFUL APPLICANTS | 2004 – 2005

Name	Department / Institution	Program	Project Title
Finkler, Evelyn Lilith	School of Planning Dalhousie University	PhD	Opposition to community based mental health facilities as manifested in land-use planning
Franz, Colin Klaus	Department of Anatomy and Neurobiology Dalhousie University	PhD	Factors enabling the selective guidance of regenerating motor neurons
Germanov, Elitza	Department of Microbiology and Immunology Dalhousie University	Masters	Role of liver and lung NKT cells in protection from tumor metastasis
Grant, Valerie	Department of Psychology Dalhousie University	PhD	A longitudinal naturalistic study of the emotional actecedents of drinking in high-risk enhancement and coping motivated drinkers
Hadi, Hadj Karim Kharrazi	Department of Psychology Dalhousie University	Masters	Developing, integrating and testing of an automated telephony natural speech interface
Hanniman, Elyisha Anne	Department of Pharmacology Dalhousie University	PhD	Characterization of FXR in the regulation of reverse cholesterol transport, hepatic elimimation and the pathology of atherosclerosis
Haymes, Sharon	Department of Ophthalmology and Visual Sciences Dalhousie University	Post Doc	Glaucoma, falls and crashes
Hoff, Benjamin	School of Planning Dalhousie University	Masters	Health and the built environment: Can pedestrian infractructure increase rates of physical activity and overall population health?
Hope, Tyna Anne	Department of Electrical and Computer Engineering Dalhousie University	PhD	Quantitative, early detection of white matter damage

STUDENT RESEARCH AWARDS
SUCCESSFUL APPLICANTS | 2004 – 2005

Name	Department / Institution	Program	Project Title
Inanlou, Mohammad Reza	Department of Anatomy and Neurobiology Dalhousie University	PhD	The role of fetal breathing-like movements in lung organogenesis
Jensen, Lisa	Department of Community Health and Epidemiology Dalhousie University	Masters	Pitch perception in cochlear implantees and normal hearing peers
Jonz, Michael George	Department of Biology Dalhousie University	Post Doc	Calcium signalling in differentiating stem cells and photoreceptors of the retina
King, Sara	Psychology Department Dalhousie University	PhD	Reactive and proactive aggression in response to provocation in children with disruptive behaviour disorders
Kumas-Tan, Zofia	School of Occupational Therapy Dalhousie University	Masters	Taking differences into account in occupational therapy theory and practice
LaPierre, Louis Rene	Biochemistry and Molecular Biology Dalhousie University	PhD	Functional components in the hepatic regulation of apolipoprotein
Lefaivre, Marie-Josee	Psychology Department Dalhousie University	PhD	Physical activity and stress in high-anxiety sensitive youth: Implication for the prevention of anxiety disorders
Leigh, Jessica W.	Department of Biology Dalhousie University	PhD	Phylogenomic investigations into the role of endosymbiosis and lateral gene transfer in shaping eukaryotic genomes
Leung, Dilys	Psychology Department Dalhousie University	Masters	A sensitive indicator of full language functioning
Lewis, Jennifer	School of Health and Human Performance Dalhousie University	Masters	Youth and physical activity: What role do parents play?

STUDENT RESEARCH AWARDS
SUCCESSFUL APPLICANTS | 2004 – 2005

Name	Department / Institution	Program	Project Title
Lowe-Pearce, Crystal	Psychology Department Dalhousie University	PhD	Emergence of imitation and its relation to other social-cognitive abilities; typical and atypical development
Lummis, Heather	Community Health and Epidemiology Dalhousie University	Masters	Effect of medication persistence on one-year outcomes in stroke survivors
Lunn, Faylene	Department of Biochemistry and Molecular Biology Dalhousie University	PhD	Effects of GTP analogues on CTP synthetase catalysis
MacDonald, Sarah	Applied Human Nutrition Mount Saint Vincent University	Masters	The impact of intrafamilial food distribution on diet quality of poor, mother-led families
Mader, Jamie S.	Pathology Department Dalhousie University	PhD	Selective induction of apoptosis in human cancer cells by lactoferricin: Studies on in vitro and in vivo anti-cancer activity of a novel lactoferrin-derived peptide
March/Dutchyn, Tressie	Psychology Department Dalhousie University	PhD	A parent's cancer: meaning, impact and coping – a distance treatment module for adolescent children
Martin, Debbie	School of Health and Human Performance Dalhousie University	PhD	More than a menu: Three generations of Metis women in coastal Labrador talk about food and the work/leisure involved in food procurement, preparation and storage
McMullen, Nichole Mae	Department of Pharmacology Dalhousie University	Masters	The isolation of cardiac progenitor cells from embryonic stem cells and the assessment of their potential for mycardial repair
McMurtry, Meghan	Pediatric Pain Research Lab Dalhousie University	PhD	Investigating reassurance and its effects on child pain and distress during immunizations
McPherson, Charmaine	School of Nursing McMaster University	PhD	Understanding child health networks: A Nova Scotia case study

STUDENT RESEARCH AWARDS
SUCCESSFUL APPLICANTS | 2004 – 2005

Name	Department / Institution	Program	Project Title
Miller, Jessica R.	Department of Biochemistry and Molecular Biology Dalhousie University	Masters	Conjugated linoleic acid and fatty metabolism
Moncrieff, Matthew	School of Health and Human Performance Dalhousie University	Masters	Determining the accuracy and reliability of a digital photographic method of measurement for lower extremity measures
Mukhida, Karim	Neurosurgery Dalhousie University	Masters	Stem cell reconstruction of the nigrostriatal dopaminergic pathway in Parkinson's disease
Mullane, Jennifer	Psychology Department Dalhousie University	PhD	Executive functioning in children with ADHD: reducing cognitive processing demands
O'Connell, Paul	Department of Biology Dalhousie University	Masters	Protein-Protein interactions and the structural organization of eukaryotic cells-cytoskeleton and molecular chaperones
Palak, Monica	School of Health and Human Performance Dalhousie University	Masters	Culture and sexuality: The experiences of young Indo-Canadian women
Phillips, Heather	Department of Chemistry Dalhousie University	Masters	Towards understanding the medicinal role of bismuth in the treatment of gastrointestinal disorders interactions of bismuth and toxic heavy metals with biochemically relevant molecules
Pinard, Leslie	School of Human Communication Disorders Dalhousie University	Masters	The effects of a sound-field FM system on auditory processing disorder, language and speech delays/disorders on non-Aboriginal and Aboriginal children with and without conductive hearing loss
Prosser, Matthew	Psychology Department Saint Mary's University	Masters	Positive self-efficacy and hope: Where do they come from and how do they make us feel better?
Sabo, Brenda	School of Nursing Dalhousie University	PhD	Caring for patients on bone marrow transplants units: Can this lead to compassion fatigue in nurses?

STUDENT RESEARCH AWARDS
SUCCESSFUL APPLICANTS | 2004 – 2005

Name	Department / Institution	Program	Project Title
Salih, Hatim	Faculty of Computer Science Dalhousie University	Masters	Better health through better information: Evaluation of a collaborative framework for brokering health information
Sargeant, Joan	Division of Medical Education Dalhousie University	PhD	Use of multi-source feedback for physician assessment, practice improvement and continued learning
Shen, Weimin	Electrical and Computer Engineering Dalhousie University	Masters	Using tele-robotic skull drill for neurosurgical applications
Stillie, RoseMarie	Department of Microbiology and Immunology Dalhousie University	PhD	Contribution of IL-1 beta and its receptors (IL-1RI and IL-1RII) to colitis-mediated colorectal cancer
Talbot, Pamela	Department of Psychiatry Dalhousie University	Masters	Agreement between administrative data and self-reported mental health service use by Nova Scotian participants of the Canadian Community Health Survey, Cycle 1.2
Uman, Lindsay	Clinical Psychology Dalhousie University	PhD	A multi-method examination of parental responses to children's pain complaints
Vincent, Nicolle	Psychology Department Dalhousie University	Masters	Condom use: The effects of relational context and perception of trust
Wepplier, Amy Lynn	Dalhousie University	PhD	Influence of lung connective tissue cells on the response of the endothelium during inflammation
Yu, Jianing	Department of Anatomy and Neurobiology Dalhousie University	Masters	Distribution and function of TRP channels in rat retinal ganglion cells
Zancy, Jordan	Department of Medicine Dalhousie University	Masters	Determination of patterns of use of histamine H2-receptor antagonists and proton pump inhibitors in Nova Scotia. Pharmacare beneficiaries from 1998 to 2002 and the role of on-demand and threshold therapy in treating gastroesophageal reflux disease

The Quest

The **John Ruedy** Award

Dalhousie student researcher gets to the heart of the matter

Heart disease is the number one killer in Nova Scotia, and Canada, accounting for 36 percent of all deaths in this province and this country. Approximately 2,800 Nova Scotians die each year from heart disease.

"This is of great concern to Nova Scotians. Almost all of us can name at least one person we know who has been affected or killed by heart disease," says Nichole McMullen, winner of The **John Ruedy** Award, *The Quest.*

"Research into the cause, treatment, and prevention of this disease is critical," she adds. "Reducing the toll of heart disease is a high priority for Nova Scotians and for the health system."

The costs of this disease are immense. In addition to the burden placed on individuals, families and communities, the financial toll is significant. In 1998, Nova Scotia spent over half a billion dollars on heart disease. Yet only two percent was allocated towards research into this deadly disease, notes Ms. McMullen, who is completing her MSc in the Department of Pharmacology at Dalhousie University.

In particular, it is critical to address the issue of acute myocardial repair, Ms. McMullen's area of research. A heart attack causes a restriction in blood flow to a section of the heart, which leads to tissue death. This area is subsequently replaced with scar tissue instead of healthy tissue, leaving the person with reduced cardiac function. After a few minor heart attacks, the patient has so much scar tissue they are unable to regain normal heart function and the heart stops, causing death.

"It is imperative to find a treatment that does not just prevent future heart attacks from occurring but that replaces the scar tissue and, therefore, improves the function of the patient's heart," says Ms. McMullen.

Her research project, funded by the Nova Scotia Health Research Foundation, will focus on developing a novel genetic method to mark specific heart cells that could be used to help repair the heart. Ms. McMullen will explore the use of a type of cell that can be grown in large scale in vitro and, if it proves beneficial, could be made easily available as a treatment. The research will be completed in Dr. Kishore Pasumarthi's laboratory at the Department of Pharmacology, the only school in Canada conducting research into the use of embryonic stem cells in heart repair.

AUDITORS' REPORT

To the Directors of Nova Scotia Health Research Foundation

We have audited the statement of financial position of the Nova Scotia Health Research Foundation as at March 31, 2005 and the statements of operating support and expenditures, changes in net assets and cash flow for the year then ended. These financial statements are the responsibility of the Foundation's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we plan and perform an audit to obtain reasonable assurance whether the financial statements are free from material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In our opinion, these financial statements present fairly, in all material respects the financial position of the Foundation as at March 31, 2005 and the results of its operations for the year then ended in accordance with Canadian generally accepted accounting principles.

Hunter Belgrave Adamson
Chartered Accountants

Dartmouth, Nova Scotia
July 25, 2005

STATEMENT OF OPERATING SUPPORT AND EXPENDITURES

YEAR ENDED MARCH 31, 2005

	2005	2004
OPERATING SUPPORT		
Grant revenue	$ 675,000	$ 675,000
Program sponsorships	36,938	23,428
Investment income	114,529	100,314
	826,467	798,742
OPERATING EXPENSES		
Salaries and benefits	299,346	225,825
Capacity building program	202,024	290,384
Communications, public awareness and research findings	123,687	143,474
Peer review of grant applications	45,512	67,296
Consultants	41,468	90,943
Rent	31,391	9,383
Office supplies	26,887	21,171
Travel and meetings	22,510	20,090
Telephone, fax and website maintenance	21,045	8,512
Knowledge translation	18,491	14,326
Depreciation	10,035	8,767
Networking and promotion	8,614	8,592
Professional development	4,512	975
Insurance	771	566
Regional partnership program	408	1,093
Moving expenses	–	7,928
Contribution to CRTN	–	5,000
Workshops	–	70,060
	856,701	994,385
EXCESS OF EXPENDITURES OVER SUPPORT	$ (30,234)	$ (195,643)

STATEMENT OF CHANGES IN NET ASSETS

YEAR ENDED MARCH 31, 2005

	Invested in property, plant and equipment	Research Awards	Administration and programs	2005 Total	2004 Total
Balance, beginning of year	$ 47,283	$ 417,996	$ 57,646	**$ 522,925**	$ 913,049
Excess of expenditures over support	–	–	(30,234)	**(30,234)**	(195,643)
Support for grants	–	3,825,000	–	**3,825,000**	3,825,000
Issuance of grants	–	(3,785,546)	–	**(3,785,546)**	(4,019,481)
Net change in investment in property, plant and equipment					
depreciation	(10,035)	–	10,035	–	–
acquisition of property, plant and equipment	4,854	–	(4,854)	–	–
Balance, end of year	$ 42,102	$ 457,450	$ 32,593	**$ 532,145**	$ 522,925

STATEMENT OF FINANCIAL POSITION

AS AT MARCH 31, 2005

	Administration and programs	Research Awards	2005 Total	2004 Total
	ASSETS			
Current assets				
Cash	$ 73,278	$ 518,359	$ 591,637	$ 276,564
Accounts receivable	24,689	37,174	61,863	33,635
Investments (note 4)	48,743	3,880,758	3,929,501	4,337,116
	146,710	4,436,291	4,583,001	4,647,315
PROPERTY, PLANT AND EQUIPMENT (note 5)	42,102	–	42,102	47,283
	$ 188,812	$ 4,436,291	$ 4,625,103	$ 4,694,598
	LIABILITIES			
Current liabilities				
Accounts payable and accrued liabilities	$ 114,117	$ –	$ 114,117	$ 34,121
Grants payable – current portion	–	3,302,353	3,302,353	3,248,072
	114,117	3,302,353	3,416,470	3,282,193
GRANTS PAYABLE	–	676,489	676,489	889,480
	114,117	3,978,842	4,092,959	4,171,673
COMMITMENTS (note 6)				
	NET ASSETS			
Net assets invested in property, plant and equipment	42,102	–	42,102	47,283
Net assets restricted	–	457,450	457,450	417,996
Net assets unrestricted	32,593	–	32,593	57,646
	74,695	457,450	532,145	522,925
	$ 188,812	$ 4,436,292	$ 4,625,104	$ 4,694,598

STATEMENT OF CASH FLOW

YEAR ENDED MARCH 31, 2005

	2005	2004
OPERATING ACTIVITIES		
Working capital from operations		
Excess of expenditures over support	$ (30,234)	$ (195,643)
Items not requiring an outlay of cash		
Depreciation and amortization	10,035	8,767
	(20,199)	(186,876)
Net change in non-cash operating working capital balances		
Accounts receivable	(28,228)	213,108
Marketable securities – restricted	456,358	(725,613)
Marketable securities – admin	(48,743)	225,838
Accounts payable and accrued liabilities	79,995	20,673
Grants payable	(158,710)	647,807
	280,473	194,937
FINANCING ACTIVITIES		
Proceeds from support for grants	3,825,000	3,825,000
Issuance of grants	(3,785,546)	(4,019,481)
	39,454	(194,481)
INVESTING ACTIVITIES		
Additions to capital assets	(4,854)	(27,874)
	(4,854)	(27,874)
INCREASE (DECREASE) IN CASH	315,073	(27,418)
CASH, BEGINNING OF YEAR	276,564	303,982
CASH, END OF YEAR	$ 591,637	$ 276,564

NOTES TO THE FINANCIAL STATEMENTS

YEAR ENDED MARCH 31, 2005

1. DESCRIPTION OF ENTITY

The Nova Scotia Health Research Foundation, a not-for-profit organization established by the Health Research Foundation Act of the Province of Nova Scotia (Bill No. 22), was given Royal Assent on December 3, 1998 and became effective on January 1, 2000. As stated in the Act, the objects of the Foundation are to assist, collaborate with and fund individuals and organizations conducting health research in the Province including the fields of health policy, health promotion and health care and without limiting the generality of the foregoing, assist health-services research, health outcome research, health public policy research and medical research.

The accompanying financial statements include only the assets and operations of the Foundation.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The financial statements have been prepared in accordance with Canadian generally accepted accounting principles and reflect the following policies:

Fund Accounting

The Foundation follows the restricted fund method of accounting for contributions.

The Administration and Programs Fund is used to account for the primary operations of the Foundation, including costs related to administration, operations, programs and promotion of the public awareness of the Foundation. Government grants and other income recorded directly by this fund include only those available for unrestricted operating purposes.

The Research Awards Fund is used to account for funds received that are designated for the issuance of research grants including grants for medical, health-outcome, health-services, and public policy research. At the time the research grants are approved, the grant amounts payable are recorded as a reduction of the fund equity.

Revenue Recognition

Contributions are recognized as revenue of the fund to which they relate in the year received or receivable if the amount to be received can be reasonably estimated and collection is reasonably assured.

Investment income earned on all investments is allocated to the Administration and Programs fund.

Financial Instruments

The Foundation's financial instruments consist of cash, accounts receivable, investments, grants payable and accounts payable. Unless otherwise noted, it is management's opinion that the Foundation is not exposed to significant interest, currency or credit risks arising from these financial instruments. The fair

market value of these financial instruments approximate their carrying values unless otherwise noted.

Investments

Investments are valued at the lower of cost and quoted market value if there is a permanent decline in value.

Use of estimates

The preparation of financial statements in conformity with Canadian generally accepted accounting principles requires the Foundation's management to make use of estimates and assumptions that affect the amounts reported in the financial statements and related notes to the financial statements. Actual results may differ from these estimates.

Property, Plant and Equipment

Property, plant and equipment are recorded at cost, and are amortized using the declining balance method except for leasehold improvements are amortized by the straight-line method over the term of the lease with a full year of amortization recorded in the year of acquisition.

3. DISTRIBUTION OF FUNDING

The annual grant made to the Foundation, which is provided from funds appropriated by the Nova Scotia legislature, shall be distributed in accordance with the objects of the Foundation as follows:

a) 40% shall be spent on medical research

b) 15% shall be spent on health-outcome research

c) 15% shall be spent on health-services research

d) 15% shall be spent on health-public policy research

e) a maximum of 15% may be spent on the administration of the Foundation and 5% of the total amount spent on administration shall be spent on increasing the public knowledge and awareness of the Foundation.

If less than the total money allocated is spent in any of the categories, the remaining portion shall be reallocated to one of the remaining categories in a manner determined by the Board.

4. INVESTMENTS

The Foundation has an investment policy in place which restricts the types of investments it can hold. The Foundation is not permitted to invest in unsecured

instruments or non-interest bearing accounts. The Foundation is not permitted to invest directly in mortgages, equities, real estate, foreign investments, and derivative securities. The Foundation is permitted to invest in mutual funds that hold these classes of investments.

At year end the Foundation's investments consisted of fixed income investments, mutual funds and segregated funds. At March 31, 2005, the market value of the investments was $3,940,346 and the book value of the investments was $3,929,501. At March 31, 2004, the Foundation's investments consisted of a money market fund with a book value and market value of $57.37 and a compound GIC with a book value, including accrued interest, of $4,337,116 maturing on October 31, 2004, with a maturity value of $4,375,229 and bearing interest at 1.5%.

6. PROPERTY, PLANT AND EQUIPMENT

	2005			2004	
	Cost	Accumulated Amortization	Net Book Value	Net Book Value	Rates
Computer	$ 24,528	$ 13,480	**$ 11,048**	$ 11,576	30%
Equipment and furniture	33,617	17,140	**16,477**	19,033	20%
Leasehold improvements	20,969	6,392	**14,577**	16,674	20%
	$ 79,114	$ 37,012	**$ 42,102**	$ 47,283	

7. COMMITMENTS

The Foundation provides grant funding through the Nova Scotia – Canadian Institute of Health Research Regional Partnership Program, providing funding of $500,000 per year. Grants issued under this program are expensed as applications are approved. Of the current year's funding commitment, $324,877 has been awarded.

8. INCOME TAX STATUS

According to Bill 22, which was given Royal Assent effective January 1, 2000, the Foundation and its property are exempt from taxation imposed by or under the authority of an enactment of the Province of Nova Scotia. The Foundation is a registered charitable organization under the Income Tax Act and is therefore exempt from income taxes.

9. ECONOMIC DEPENDENCE

The Province of Nova Scotia provides the Foundation with funding necessary to provide grant support. The Foundation's ability to issue research grants is currently dependant on receiving adequate funding from the Province of Nova Scotia.

MEMBERS OF THE BOARD

CURRENT

Brian D. MacDougall, Chair
Brian is the Vice President of Operations and Support Services at the IWK Health Centre for Children, Women and Families in Halifax. He received his Masters of Health Services Administration from Dalhousie University. Brian is also a Certified Health Executive and a Certified Management Consultant. He has been a member of the NSHRF Board of Directors since 2000.

Colleen Elliott
Colleen, a registered nurse specializing in gerontology, is on staff at the Mira Long Term Care Facility in Truro. A graduate of St. Joseph's Hospital in Toronto, Colleen has her certificate in Alzheimer's Disease and Related Dementias. She is currently the Chairperson of the Well Women's Clinic in Truro and on the Board of the Nova Scotia Gynecological Cancer Screening Program. Colleen, past president of the Nova Scotia Division of the Canadian Cancer Society, was honoured with the Canada 125 medal for her volunteer efforts.

John Gainer
John is the Clinical Coordinator of the Eating Disorders Program at the Cape Breton Healthcare Complex, a position he has held since 1994. He is also chair of the Research Ethics Committee. John received his PhD in Clinical Psychology from McGill University in Montreal. He is the author of more than a dozen health research papers.

Frances Hinton
Frances is a lawyer and registered nurse. She received her law and post-RN degrees from Dalhousie University in 1991. Her legal career has been focused on dispute resolution and human rights. In addition to being a Chartered Arbitrator with the Alternate Dispute Resolution Institute of Canada, she is a Commissioner with the Nova Scotia Police Commission. While her nursing background is in cardiac research, she currently works on a casual basis on the Palliative Care Unit at the QEII Health Sciences Centre.

Patrick J. McGrath
Patrick is a Killam Professor of Psychology, and Professor of Pediatrics and Psychiatry, and Canada Research Chair at Dalhousie University where he directs the PhD program in clinical psychology. He has research labs at Dalhousie and the IWK Health Centre. Patrick's research program is on pediatric pain and also on distance delivery of psychological treatment. His research has been recognized by appointment to the Order of Canada (Officer) and election to the Royal Society of Canada. He is the Principal Investigator of the Canadian Institutes of Health Research Strategic Training Program on Pain in Child Health and a Community Alliance for Health Research on distance treatment. His most recent professional book is *Pediatric Pain: Biological and Social Context* published by the International Association for the Study of Pain.

Peter McLeod
Peter is a professor of Psychology at Acadia University where he has also served as Director of Research and Graduate Studies. Prior to joining the faculty of Acadia in 1989, Peter received his PhD in Experimental Psychology from Dalhousie University and held a Killam Postdoctoral Fellowship at UBC. His health-related research interests focus on stress responses and risk factors for depression and anxiety.

Peter W. Mullen
An alumnus of Acadia University, Peter is the founder and president of Kemic Bioresearch in Kentville, which provides research and consulting services in pharmacokinetics and toxicology. He holds a PhD from the University of Manchester, England. After a year as a British Empire Cancer Research Campaign Post-doctoral Fellow at the University of Edinburgh, he returned to Manchester, becoming a tenured member of the Department of Pharmacology, prior to establishing Kemic upon his return to Nova Scotia. Over the past 20 years, Peter has also taught courses at both Acadia and Dalhousie Universities.

Donna Meagher-Stewart
Donna is the Associate Director of the Master of Nursing program at Dalhousie University School of Nursing in Halifax. She has a PhD from the University of Toronto. Donna is an active participant in the health research community and her work has appeared in several journals and books.

Thomas Rathwell
Thomas is a professor and Director of the School of Health Services Administration at Dalhousie University in Halifax. His areas of specialization include health policy and planning, population health, comparative healthcare systems and public participation. Thomas, who received his PhD from the University of Durham, also served as the Head of the World Health Organization's Collaborating Centre for Health Care Systems Research and Development.

Maureen Summers
Maureen is the Executive Director of the Canada Cancer Society – Nova Scotia Division. She has an MSc in Health Studies and a BSc from the University of Waterloo.

Madine VanderPlaat
Madine is an Associate Professor of Sociology and Women's Studies at Saint Mary's University. A research methodologist and program evaluator, Madine received her PhD in the Sociology of Education from Dalhousie University. Her research and publication interests focus on collaborative and participatory research strategies, empowerment-oriented program evaluation and social interventions designed to promote social inclusion and civil society. Madine is currently working with the human rights and health research unit at the National School for Public Health in Brazil and on the development of a coastal communities network for women's and children's health and HIV/AIDS.

TERM ENDED

Joan Fraser
Joan is a former Executive Director of the Heart and Stroke Foundation of Nova Scotia and the former Chair of the Health Charities Network of Nova Scotia. She is also a former judge of the Court of Canadian Citizenship for Nova Scotia. Joan is particularly interested in research related to heart disease and stroke, health promotion, population health and health outcomes. (Term ended October 2004)

Thomas Larder
Thomas is the chair of the Board of Directors of Canadian Dental Services Plans Inc. and president of Endo/Tech in Nova Scotia. He received his DDS from the Faculty of Dentistry at Dalhousie University in Halifax and his Certificate in Endodontics from Tufts University School of Dental Medicine in Boston. The Nova Scotia Dental Association has previously honored Thomas as Volunteer of the Year. (Term ended October 2004)

FOUNDATION STAFF

Krista Connell
Chief Executive Officer
Krista is the Foundation's first Chief Executive Officer. Her job is extensive. She is responsible for providing the leadership and professional guidance necessary for the NSHRF to attain its strategic goals. Krista also oversees the tactical operation of the Foundation and ensures its effective and efficient operation.

As the Chief Executive Officer, Krista is also responsible for outreach to the research community in its broadest sense and for the development of policies and approaches that foster involvement and support on the part of stakeholders. Krista reports directly to the Board of Directors.

Colleen Clattenburg
Administrative Assistant
Colleen is the Foundation's Administrative Assistant. In this capacity, she provides support to the CEO and the Board of Directors. Colleen joined the Foundation shortly after it was established and provided administrative support to the Interim Merit Review Committee. She was also instrumental in the development of application information for the very first call for funding.

Deborah Langille
Director Performance Accountability
As Director of Performance Accountability, Deborah is responsible for assisting in the development of strategic directions for the Foundation over the next three to five years. As well, she oversees monitoring, evaluation and communication of our corporate performance.

Lesley Poirier
Program Manager – Research Awards
Lesley is the Program Manager – Research Awards for NSHRF. She is responsible for the provincial competition and matching grant awards. This involves management of the competition process as well as all the communication, analytical, development, and capacity elements of the programs.

Mary Ann Skaro
Program Manager – Strategic Programs
Mary Ann is responsible for evaluating the effectiveness of NSHRF's many programs. In particular, she oversees development, management, budgeting and evaluation of the Capacity Building program, the Knowledge Transfer program, and workshop support. The goal is to assist the research community in achieving objectives that will ultimately benefit all Nova Scotians.

Andrei Usatii
Research Partnership Coordinator
In this unique position as Research Partnership Coordinator, Andrei is responsible for leading specific research initiatives for the Heart and Stroke Foundation of Nova Scotia, the Office of Health Promotion, and the Nova Scotia Health Research Foundation. He provides support for capacity program initiatives and knowledge transfer strategy development and implementation for NSHRF; assists with implementation of research goals for HSFNS; and is developing a research strategy for Office of Health Promotion.

Marie Deveau Wournell
Secretary/Receptionist
Marie is the Foundation's Secretary/Receptionist. She is responsible for the smooth day-to-day running of the organization and provides administrative support to the Program Managers. For many, Marie is the first introduction to the Nova Scotia Health Research Foundation.

TYPES OF RESEARCH FUNDED

The Nova Scotia Health Research Foundation provides support to individuals and organizations conducting health research in four key areas:

Medical Research, which includes basic scientific and biomedical research as well as clinical and epidemiological investigations.

Health Outcomes Research, which seeks to determine changes in the health status of populations as a result of health programs or services.

Health Services Research, which examines how efficiently and effectively health services are managed, organized and delivered.

Health Public Policy Research, which studies the impact of social factors, allocation of resources, legal and ethical issues, and the administration, organization and financing of healthcare.

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